

# Oil and Natural Gas Corporation Limited HSE Section, Cauvery Basin

11th Floor-West, CMDA Buildings-1, Egmore, Chennai-600008 Phone: 044-28573183 Mobile: 9445005988

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### No. CB/HSE/MoEF compliance/2016-17

Thursday, 23 June 2016

From: GM (C & M)-I/c HSE

To : The Additional Principal Chief Conservator of Forests (C),

Ministry of Environment and Forests,

Regional Office, No. 34, Cathedral Garden Road,

Nungambakkam, Chennai.

Sub:- Six monthly compliance report for the period from 01.10.2015 to 31.3.2016

Ref: - EC No. F. No. J-11011/2/2011-1A II (1) dated 21st August 2013.

This is with reference to the EC granted by MoEF vide EC No. F. No. J-11011/2/2011-1A II (1) dated 21<sup>st</sup> Aug 2013 for L-II Block of Cauvery Basin, Chennai. In this regard, the six months compliance report for the period 01.10.15 to 31.03 16 is enclosed along with the annexures.

Regards,

(S. Velu) GM (C & M)-I/c HSE

Encl: As above

# Compliance to the Environment Clearance issued by MOEF Vide Itr. No. F. No. J-11011/2/20111A II (1) dated 21st August 2013 For the period 01.10.2015-31.3.2016

### A. SPECIFIC CONDITIONS:

| SI.<br>No. | Conditions   | Remarks  |
|------------|--|--|
| i          | Gas produced during testing shall be flared with appropriate flaring booms. The flare system shall be designed as per good oil field practices and Oil Industry Safety Directorate (OISD) guidelines. The stack height shall be provided as per the regulatory requirements and emissions from stacks will meet the MoEF/CPCB guidelines.  No drilling shall be carried out within 10 KMs from the National park/Wildlife Sanctuary. | safety directorate.  No flare stacks are used during production testing exploratory wells and only flare pipes are used as t testing lasts only for a few days and flaring is do for a few hours/day. Flare stacks are used only permanent oil installations.  |
| ii         | Exploratory drilling of one proposed well in<br>Thanjavur District of Tamil Nadu shall not be<br>carried out as M/s. ONGC has dropped the<br>proposal for drilling of one exploratory well in<br>the Thanjavur district.   | Exploratory drilling of one proposed well<br>Thanjavur District of Tamil Nadu has not bee<br>carried out under this EC.  |
| III        | This Environmental Clearance is only for<br>Exploratory drilling. In case development<br>drilling is to be done in future, prior clearance<br>must be obtained from the Ministry.  | In case development drilling is to be done in future<br>prior clearance shall be obtained from the Ministry  |
| iv         | Ambient Air Quality shall be monitored near the closest Human settlements as per the National Ambient Air Quality Emission Standards issued by the Ministry vide GSR No. 826 (E) dated 16 <sup>th</sup> Nov. 2009 for PM <sub>10</sub> , PM <sub>25</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, Methane and non-methane HC, etc.,  | Ambient air quality around the Drill site wa<br>monitored for PM <sub>10</sub> , PM <sub>25</sub> , SO <sub>2</sub> , NO <sub>x</sub> , CO, Methan<br>and non-methane HC, etc., by M/s. Hubert Enviro<br>Chennai (NABL Accredited and recognised by<br>MoEF) near the closest Human settlements.<br>(Annexure-1) |
| ,          | Mercury shall also be analysed in air, water and drill cuttings twice during drilling period.  | Chemicals used for drilling mud were tested, No traces of Mercury. However mercury analysed in air, water and drill cuttings.(Annexure – 2)  In ONGC operations there is no source of Hg emissions.  |
| ri         | Approach road shall be made pucca to minimise generation of suspended dust.  | Approach Road was made from the nearest main<br>road to the drill site and the distance varies from 200<br>m to 1 KM having a width of 4 m on an average   |

| vii  | The company shall make the arrangement for   | 에 있어요   |
|------|--|---|
|      | control of noise from the drilling activity.  Acoustic enclosure should be provided to DG sets and proper stack height should be provided as per CPCB guidelines.  | MoEF) and the report is enclosed. (Annexure-3).  Acoustic enclosures are provided in DG sets; T stack height meets the regulatory requiremen 11.17 M height stack have been provided and t stack emission has been monitored by the above thi party. As per the reports, the levels are within the limit (Annexure-3) |
| viii | Total water requirement shall not exceed 25 Cu.<br>M/Day and prior permission shall be obtained<br>from the concerned Agency.  |   |
| ix   | The company shall construct the garland drain all around the drilling site to prevent run off of any oil containing waste into the nearby water bodies. Separate drainage system shall be created for oil-contaminated and non-oil contaminated. Effluent shall be properly treated and treated waste water shall confirm to CPCB standards. | and the drainage system is designed to preve<br>mixing of oil contaminated and non-c  |
| х    | Drilling waste water including drill cuttings wash water shall be collected in disposal pit lined with HDPE lining evaporated or treated and shall comply with the notified standards for onshore disposal. The membership of common TSDF should be obtained for the disposal of drill-cuttings and hazardous waste. Otherwise secured       |   |
|      | landfill shall be created at the site as per the design approved by CPCB and obtain authorization from the SPCB. Copy of authorization or membership of TSDF shall be submitted to Ministry's Regional Office at Bangalore.  | The membership of TSDF obtained Copy attachs (Annexure-4)   |
| xi   | Good sanitation facility shall be provided at the<br>drilling site. Domestic sewage shall be disposed<br>off through septic tank/soak pit.   | Sanitation facility are provided to personnel at the<br>drill-site and a separate septic tank/soak pit<br>constructed to collect the domestic sewage.   |
| xii  | Oil spillage prevention scheme shall be prepared. In case of oil spillage/contamination, action shall be prepared to clean the site by adopting proven technology. The recyclable waste (oily sludge) and spent oil shall be disposed of to the Authorised recyclers.  | Oil spillage contingency plan is in place and wast<br>oil disposed to MSTC Ltd., (Govt. of Indi<br>Enterprise)TNPCB authorised waste oil recycle<br>through central store at Karaikal. (Annexure-5)   |

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|-------|--|---|
|       | The company shall comply with the guidelines<br>for disposal of solid waste, drill-cutting and<br>drilling fluids for onshore drilling operation<br>notified vide GSR 546 (E) dated 30.8.2005.   | collected in HDPE lined waste pits to avo<br>percolation into soil. The liquid is allowed for sol<br>evaporation and the solid component is covered wi<br>a layer of local excavated soil.                        |
| xiv   | The company shall take necessary measures to prevent fire hazards, containing oil spill and soil remediation as needed. Possibility of using ground flare should be explored. At the place of ground flaring, the overhead flaring stack with knock out drums shall be installed to minimise gaseous emissions during operation.   | plan is kept in place. Production testing is carried or<br>only for few days and the flaring is restricted to fe<br>hours only  |
| xv    | The company shall develop a contingency plan<br>for H <sub>2</sub> S release including all necessary aspects<br>from evacuation to resumption of normal<br>operations. The workers shall be provided with<br>personal H <sub>2</sub> S detectors in locations of high risk<br>of exposure along with Self-Containing<br>Breathing Apparatus.   | There is no hydrogen sulphide presence in the block<br>However Hydrogen sulphide contingency plan is i<br>place and all personnel operating in H <sub>2</sub><br>environment are provided with detectors and SCBA |
| Xvi   | On completion of drilling the company have to<br>plug the drilled wells safely and obtain certificate<br>from environment safety angle from the<br>concerned authority.  | On completion of drilling the drilled wells an plugged safely. Certificate will be obtained once the well is declared abandoned.  |
| Xvii  | Blow out Preventer (BOP) system shall be installed to prevent well blowouts during drilling operations. BOP measures during drilling should focus on maintaining well bore hydrostatic pressure by proper pre-well planning and drilling fluid logging etc.  | Blowout preventer (BOP) is installed and Primary<br>well control is achieved through proper wel<br>planning and drilling fluid, logging etc.  |
| Xviii | Emergency Response Plan (ERP) shall be based<br>on the guidelines prepared by OISD, DGMS and<br>Govt. of India   | ERP as per Guidelines of OISD,DGMS and Govt. of India is in place   |
| Xix   | The company shall take measures after completion of drilling process by well plugging and secured enclosures, decommissioning of rig upon abandonment of the well and drilling site shall be restored to the original condition. In the event that no economic quantity of hydrocarbon is found a full abandonment plan shall be implemented for the drilling site in accordance with the applicable Indian Petroleum Regulations. | Drilling work has been completed at one well KNAK. The remediation shall be done after it is declared abandoned.  |

|        |  | /  |
|--------|--|--|
| Xx     | Abandoned well inventory and remediation plan<br>shall be submitted within six months from the<br>date of issue of letter.   | Drilling work has been completed at one we KNAK. The remediation shall be done after it declared abandoned.  |
| Xxi    | Occupational health surveillance of the workers<br>shall be carried out as per the prevailing Acts and<br>Rules  | Occupational Health policy is in place as per tl<br>Mines Act.   |
| Xxii   | In case of commercial viability of the Project is<br>established, the company shall prepare a detailed<br>plan for development of oil and gas fields and<br>obtain fresh environment clearance from the<br>Ministry,   | In case of Commercial availability of Hydrocarbo<br>Environment clearance will be obtained from MoE  |
| Xxiii  | Restoration of the project site shall be carried out<br>satisfactorily and report shall be sent to the<br>Ministry's Regional Office at Bangalore.   | During the reporting period, one well, KNAK has been declared dry & abandoned.   |
| Xxiv   | Oil content of the drill cuttings shall be<br>monitored by some Authorized agency and report<br>shall be sent to the Ministry's Regional Office at<br>Bangalore.   | Oil content in drill cuttings was monitored b // Hubert Enviro Services, Chennai (NAB Accredited and recognised by MoEF) and the repo is enclosed. (Annexure-6)  |
| Xxv    | All the commitment made regarding issues raised during the Public hearing/consultation meeting held on 5th December 2012, 5th February 2013 and 12th March 2013 shall be satisfactorily implemented and adequate budget provision shall be made accordingly. | There were no demand during the Public Hearing.  |
| Xxvi   | Under Corporate Social Responsibility (CSR) sufficient budgetary provision shall be made for health improvement, education, water and electricity supply etc., in and around the project.  | Under Corporate Social Responsibility (CSF sufficient budgetary provision has been made for health improvement, education, water an electricity supply etc., in and around the projection (Annexure-7) |
| Xxvii  | An audit shall be done to ensure that the<br>Environment Management Plan is implemented<br>in totality and report shall be submitted to the<br>Ministry's Regional Office.   | Complied. Environment Management Plan audit has been conducted at #KNAK. Copy of the report i enclosed. (Annexure-8)   |
| Xxviii | A social audit shall be carried out for the whole operation area with the help of reputed institute like Madras Institute of Social Science etc.   | Complied. Social audit has been carried out for the whole operation area with the help of Madra Institute of Social Science and copy of summary correport is enclosed. (Annexure-9)                    |

| Xxix | All personnel including those of contractors shall be trained and made fully aware of the hazards risks and controls in place.   |   |
|------|--|---|
| Xxx  | Company shall have own Environment<br>Management Cell having qualified persons with<br>proper background.  | a degree a management   |
| Xxxi | Company shall prepare operating manual in respect of all activities. It shall cover all safety & environment related issues and system. Measures to be taken for protection. One set of environment manual shall be made available at the drilling site/project site. Awareness shall be created at each level of the management. All the schedules and results of environmental monitoring shall be available at the project site office. | Procedures) in place for all onshore operation covering all aspects of the operations. In addition the personnel are trained at ONGC's Institute of Petroleum Safety, Health and Environment Management, Goa. SOP are available at drill-sites All the results of environmental monitoring will be available at the project site office/uploaded in |
| G    | eneral conditions  |   |
| i    | The Project authorities must strictly adhere to<br>the stipulations made by the Tamilnadu<br>Pollution Control Board the state Government<br>and any other statutory authority.  | The stipulations made by the Tamilnadu<br>Pollution Control Board and other statutory<br>authority are followed. Applied for CTO on<br>23.10.15.Copy will be submitted on receipt.  |
| li   | No further expansion or modification in the project shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environment protection measures required if any           | Agreed & shall be complied.   |
| iii  | The project authorities must strictly comply with<br>the rules and regulation under Manufacture,<br>Storage and Import of Hazardous chemicals<br>Rules, 2000 as amended subsequently. Prior<br>approvals from Chief Inspectorate of Factories,<br>Chief Controller of Explosives, Fire Safety<br>Inspectorate etc. must be obtained, wherever<br>applicable.   | ONGC is the member of the TSDF and Hazardous waste is sent to TSDF (Annexure-4)   |
| iv   | The overall noise levels in and around the plant<br>area shall be kept well within the standards by<br>providing noise control measures including<br>acoustic hoods, silencers enclosures etc. on all<br>sources of noise generation. The ambient noise<br>levels shall conform to the standards prescribed  | Noise levels were measured by M/s. Hubert<br>Enviro Services, Chennai (NABL Accredited and<br>recognised by MoEF) and are within limits.<br>(Annexure-3)  |

|      | under EPA Rules, 1989 vi. 75 dB (A) (daytime)<br>and 70 dB (A) (nighttime)  |   |
|------|---|---|
| ٧    | A separate Environmental Management Cell<br>equipped with full-fledged laboratory facilities<br>must be set up to carry out the environmental<br>management and monitoring functions.   | Full-fledged laboratory facilities are set up for<br>Environmental Management. Environmental<br>monitoring through MoEF recognised and NABL<br>accredited labs are carried out.   |
| vi   | A copy of clearance letter shall be sent by the proponent to the concerned Panchayat, Zila Parishad/Municipal Corporation, Urban local body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.   | No suggestions/representations were received from any Panchayat, Zila Parishad/Municipal Corporation, Urban local body and the local NGO. The clearance letter is uploaded in the Company's website.  |
| vii  | The Project Proponent shall upload the status of compliance of stipulated Environment clearance conditions, including the results of the monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the regional office of the MOEF, the respective Zonal office of CPCB and the TNPCB. The criteria pollutant level namely, SPM,RSPM, SO2, NOx, HC(Methane &NON-Methane),VOCs (Ambient Levels as well as stack emissions) or critical Sectorial parameters, indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain. | The status of compliance of stipulated Environment clearance conditions including the results of the monitored data are sent to the regional office of the MOEF, the respective Zonal office of CPCB and the TNPCB and are uploaded.  All the results of environmental monitoring are displayed at the drill-site and is being uploaded in company's public domain. |
| viii | The Project Proponent shall also submit six monthly reports on the status of the stipulated environmental conditions including the results of the monitored data (both in hard copies well as by e-mail) to the regional office of MOEF/the respective Zonal office of CPCB and the TNPCB. The Regional office of this ministry/CPCB/TNPCB shall monitor the stipulated conditions  | Six monthly reports are being sent to Regional office MOEF, Chennai.  |
| ix   | The Environmental statement for each financial year ending 31 March in Form-V as is mandated to be submitted by the project proponent to the concerned state pollution control Board as prescribed in the under the Environment Protection Rules 1986 as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional offices of the MOEF by e-mail   | Being submitted regularly for installations.<br>Environmental Statement - Form V will also be<br>uploaded in company's website.   |
| ×    | The Project proponent shall inform the public<br>that the project has been accorded Environment<br>clearance by the Ministry and copies of the<br>clearance letter are available with the TNPCB   | The advertisement is given two leading dailies<br>Dinakaran in Tamil and Hindu on 02.01.2011and<br>the same was sent to RO of MoEFCC, Chennai.  |

|    | and may also be seen at the website of the Ministry of Environment and Forests at http://envfor.nic.in. This shall also be advertised within seven days from the date of issue of the clearance letter at least in two local Newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the regional office | compliance report.   |
|----|--|--|
| хi | Project Authorities shall inform the Regional<br>Office as well as the Ministry the date of<br>Financial closure and the final approval of the<br>project by the concerned authorities and the date<br>of commencing the land development work.  | The project is still in progress. Shall be informed to MoEF after the completion of the project. |

## 4.0 AMBIENT AIR QUALITY STATUS

L. SPOK SUMM

### 4.1 Preamble

The objective of the Ambient Air Quality monitoring is to assess the existing levels of air pollutants as well as the regional background concentration in the project area. Air pollution forms an important and critical factor to study the environmental issues in the project areas. Air qualities have to be frequently monitored to know the extent of pollution due to mining and allied activities. Thus, ambient air quality monitoring was carried out at 2 locations. The ambient air quality monitoring stations are given.

### AMBIENT AIR MONITORING STATIONS

| SI.No. | Location Name  | Location Code |
|--------|----------------|---------------|
| 1.     | Near Main Gate | AAQ-I         |
| 2.     | Near DG Area   | AAQ-2         |

### 4.2 Data Presentation

The Ambient Air Quality data in terms of PM,PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>2</sub>and CO are given in Table.

### TEST REPORT- AAQI

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Sample Description

: Ambient Air

Sampling Mark

: UP Wind (Near Main Gate)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date Analysis Commenced On : 29/03/2016 - 30/03/2016 : 30/03/2016

| S.No. | Parameters                                  | Units |               | Results Obtained | 9             | Test Method                         | NAAQ Standards : 2009 |               |
|-------|---|-------|---------------|------------------|---------------|-------------------------------------|-----------------------|---------------|
|       |   |       | 06,00 - 14,00 | 14.00 - 22.00    | 22.00 - 06.00 |                                     |                       |               |
| 1     | Sulphur Dioxide                             | µg/m² | 13.00         | 12.15            | 12.87         | ES: 5182 (P-<br>2):2001(Reaff:2006) | 80 (24 hours)         | 50 (Annual)   |
| 2     | Nitrogen Dioxide                            | mB/m, | 24 01         | 25,78            | 25.63         | IS: 5182 (P-6):2006                 | 80 (24 hours)         | 40 (Annual)   |
| 3     | Particulate Matter Size<br>Less than 10 µm  | µg/m³ | 53.94         | 55.20            | 55.12         | IS: 5182 (P-23):2006                | 100 (24 hours)        | 60 (Annual)   |
| 4     | Particulate Matter Size<br>Less than 2.5 µm | μg/m¹ | 24.72         | 26.39            | 26.39         | HECS/AIR/Ambient/SOP011             | 60 (24 hours)         | 40 (Annual)   |
| 5     | Carbon Monoxide                             | mg/m  | 0.015         | 0.010            | 0.012         | IS: 5182 (P-10)<br>1999(Reaff:2003) | 4 (1 hours)           | 2 (8 hours)   |
| 6     | Lead  | HB/ma | BDL(DL 0.05)  | BDL(DL 0.05)     | BDL(DL 0.05)  | IS: 5182 (P-22)<br>2004(Reaff 2009) | I (24 hours)          | 0.5 (Annual)  |
| 7     | Ozone                                       | μg/m³ | 12.81         | 11.02            | 13.96         | HECS/AIR/Ambient/SOP013             | 180 (1 hours)         | 100 (8 hours) |
| 8     | Ammonia                                     | µg/m³ | 7.27          | 8.12             | 9,02          | HECS/AIR/Ambient/SOP012             | 400 (24 hours)        | 100 (Annual)  |
| 9     | Benzene                                     | µg/m³ | BDL(DL 1)     | BDL(DL 1)        | BDL(DL 1)     | 1S: 5182 (P-<br>11):2006(RA:2009)   | 5 (Annual)            | 5 (Annual)    |
| 10    | Benzo(a)pyrene                              | ng/m³ | BDL(DL 1)     | BDL(DL 1)        | BDL(DL I)     | IS: 5182 (P-12):<br>2004(RA:2009)   | 1 (Annual)            | 1 (Annual)    |
| 11    | Arsenic                                     | ng/m² | BDL(DL 1)     | BDL(DL 1)        | BDL(DL1)      | HECS/AIR/Ambient/SOP014             | 6 (Annual)            | 6 (Annual)    |
| 12    | Nickel                                      | ng/m³ | BDL(DL 5)     | BDL(DL 5)        | BDL(DL 5)     | HECS/AIR/Ambient/SOP007             | 20 (Annual)           | 20 (Annual)   |
| 13    | Hydrocarbons                                | ppb   | 912           | 908              | 924           | IS 5182 Part 21 : 2001              | NA.                   | NA.           |
| 14    | Non Methane<br>Hydrocarbons                 | ppb   | 509           | 496              | 516           | IS 5182 Part 21 : 2001              | NA                    | NA.           |
| 15    | Hydrogen Sulphide                           | μg/m³ | BDL(DL 6)     | BDL(DL 6)        | BDL(DL 6)     | IS 5182 Part 7: 2003                | NA .                  | NA            |
| 16    | Mercury                                     | ng/m³ | BDL(DL 1)     | BDL(DL 1)        | BDL(DL I)     | NIOSH 6009                          | NA                    | NA            |
| 17    | TVOC  | ppm   | 1.4           | 1.2              | 1.6           | PID Method                          | NA                    | NA            |
| 18.   | SPM   | μg/m³ | 82.9          | 81.06            | 84.70         | IS 5182 Part 4 1999                 | NA                    | NA            |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, µg/m³-Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter.

\*\*\*End of Report\*\*\*

### TEST REPORT - AAQ2

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Sample Description Sampling Mark

: Ambient Air : Down Wind (Near DG Area)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/2016 - 30/03/2016

Analysis Commenced On : 30/03/2016

| S.No. | Parameters                                  | Units             |               | Results Obtained |               | Test Method                         | NAAQ Standards: 2009 |              |
|-------|---|-------------------|---------------|------------------|---------------|-------------------------------------|----------------------|--------------|
|       | 0.000                                       |                   | 06.00 - 14.00 | 14.00 - 22.00    | 22.00 - 06.00 |                                     |                      |              |
| 1     | Sulphur Dioxide                             | μg/m²             | 13.41         | 13 90            | 12.06         | IS 5182 (P-<br>2) 2001(Reaff 2006)  | 80 (24 hours)        | SO (Annual   |
| 2     | Nitrogen Dioxide                            | #8/an             | 24.11         | 25.90            | 23.16         | 2S. 5182 (P-6) 2006                 | 80 (24 hours)        | 40 (Annual   |
| 3     | Particulate Matter Size Less<br>than 10 µm  | µg/m²             | 54 37         | 58.01            | 51.34         | IS: 5182 (P-23) 2006                | 100 (24 hours)       | 60 (Annual   |
| 4     | Particulate Matter Size Less<br>than 2.5 µm | μg/m <sup>3</sup> | 26.09         | 27.16            | 24.10         | HECS/AIR/Ambient/SOP011             | 60 (24 hours)        | 49 (Annual   |
| 5     | Carbon Monoxide                             | mg/m              | 0.020         | 0.013            | 0.014         | IS 5182 (P-10)<br>1999(Reaff 2003)  | 4 (1 hours)          | 2 (8 hours)  |
| .6    | Lead  | µg/m²             | BDL(DL 0.05)  | BDL(DL 0.05)     | BDL(DL 0.05)  | IS: 5182 (P-22)<br>2004(Reaff:2009) | 1 (24 hours)         | 9.5 (Annual  |
| 7     | Ozone                                       | μg/m³             | 12.77         | 13.06            | 11.87         | HECS/AIR/Ambient/SOP013             | 189 (1 hours)        | 100 (8 hours |
| 8     | Ammonia                                     | µg/m³             | 7.70          | 8.01             | 8.24          | HECS/AIR/Ambient/SOP012             | 400 (24 hours)       | 100 (Annua   |
| 9     | Benzene                                     | µg/m³             | BD((DL 1)     | BDL(DL1)         | BDL(DL 1)     | IS: 5182 (P-<br>11):2006(RA:2009)   | 5 (Annual)           | 5 (Annual)   |
| 10    | Benzo(a)pyrene                              | ng/m³             | BDL(DL 1)     | BDL(DL 1)        | BDL(DL I)     | IS: 5182 (P-12):<br>2004(RA:2009)   | 1 (Annual)           | 1 (Annual)   |
| 11    | Arsenic                                     | ng/m²             | BDL(DL-1)     | BDL(DL 1)        | BDL(DL 1)     | HECS/AIR/Ambient/SOP014             | 6 (Annual)           | 6 (Annual)   |
| 12    | Nickel                                      | ng/m³             | BDL(DL 5)     | BDL(DL 5)        | BDL(DL 5)     | HECS/AfR/Ambient/SOP007             | 20 (Annual)          | 20 (Annual)  |
| 13    | Hydrocarbons                                | ppb               | 921           | 911              | 935           | IS 5182 Part 21 : 2001              | NA.                  | NA:          |
| 14    | Non Methane Hydrocarbons                    | Ppb               | 540           | 530              | 518           | IS 5182 Part 21 : 2001              | NA                   | NA           |
| 15    | Hydrogen Sulphide                           | µg/m²             | BDL(DL 6)     | BDL(DL 6)        | BDL(DL 6)     | IS 5182 Part 7 : 2003               | NA.                  | NA           |
| 16    | Mercury                                     | ng/m³             | BDL(DL 1)     | BDL(DL 1)        | BDL(DL 1)     | NIOSH 6009                          | NA.                  | NA           |
| 17    | TVOC  | ppm               | 1.8           | 2.1              | 1.6           | PID Method                          | NA                   | NA           |
| 18    | SPM   | µg/m³             | 96.3          | 97.04            | 92.11         | 1S 5182 Part 4 1999                 | NA                   | NA           |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, µg/m3-Micrograms per cubic meter, Note:-BDL -Below Detection Limin, D.J. - Personal Properties of Report\*\*\*
mg/m²-Milligrams per cubic meter, ng/m²-Nanograms per cubic meter.
\*\*\*End of Report\*\*\*

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Sample Description Sampling Mark : DG Stack Emission : DG 1430 KVA – I

Sample Drawn By Sampling/Received Date Analysis Commenced On : Hubert Enviro Care Systems Private Limited : 29/03/2016 - 30/03/2016

: 30/03/2016 - 30/03/.

| S.No. | Parameters                   | Units               | Results      | Test Method                     | Standards |
|-------|------------------------------|---------------------|--------------|---------------------------------|-----------|
| 1     | Stack Diameter               | meter               | 0.2          |                                 |           |
| 2     | Stack Temperature            | °C                  | 246          | IS 11255(P-3)2008               |           |
| 3     | Velocity of flue gas         | m/sec               | 0.11         | IS 11255 (P-3)2008              | *:        |
| 4     | Flow rate of stack gases     | Nm <sup>5</sup> /hr | 648          | IS 11255 (P-3)2008              |           |
| 5     | Suspended Particulate Matter | mg/Nm <sup>1</sup>  | 52.24        | IS 11255 (P-1) 1985(Reaff.2003) | 150       |
| 6     | Sulphur Dioxide              | mg/Nm <sup>3</sup>  | 15.43        | 15.11255 (P-2) 1985(Reaff 2003) | -         |
| 7     | Nitrogen Dioxide             | ppm                 | 254.08       | IS 11255 (P-7) 2005             | 1100      |
| 9     | Carbon monoxide              | mg/Nm³              | BDL(DL 1)    | IS 13270 -1992(Realf:2009)      | 150       |
| 10    | Carbon dioxide               | %V/V                | 12.4         | IS 13270:1992(Reaff:2009)       | - 53      |
| 11    | Volatile Organic Compound    | ppm                 | 3.4          | PID Gas Detector                | 51        |
| 12    | Hydrocarbon                  | ppm                 | 8.3          | NDIR techinque                  |           |
| 13    | Moisture                     | %                   | 1.12         | IS 11255 (P-3) 2003             |           |
| 14    | Mercury                      | mg/Nm³              | BDL(DL 0.01) | USEPA method 29                 |           |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, m/sec -Meter per second, Nm\*/hr-Normal cubic meter per hour, mg/Nm\*-Milligrams per Normal cubic meter, \*C -Celsius, ppm-Parts per million, %V/V-Percentage Volume per Volume. Remarks: No direct TNPCB / CPCB Limits for the above parameters; meets as per MoEF standards, where applicable.

\*\*\*End of Report\*\*\*

Page 1 of 1

Sample Description Sampling Mark Sample Drawn By : DG Stack Emission : DG 1430 KVA - 2

: Hubert Enviro Care Systems Private Limited : 29/03/2016 – 30/03/2016

Sampling/Received Date Analysis Commenced On

: 30/03/2016

| S.No. | Parameters                   | Units               | Results      | Test Method                      | Standards |
|-------|------------------------------|---------------------|--------------|----------------------------------|-----------|
| 1     | Stack Diameter               | meter               | 0.2          | ·                                | - 2       |
| 2     | Stack Temperature            | °C                  | 323          | IS 11255(P-3)2008                | 24        |
| 3     | Velocity of flue gas         | m/sec               | 12.4         | IS 11255 (P-3)2008               |           |
| 4     | Flow rate of stack gases     | Nm <sup>4</sup> /hr | 636          | IS 11255 (P-3)2008               |           |
| 5     | Suspended Particulate Matter | mg/Nm³              | 57.35        | IS 11255 (P-1) 1985(Reaff 2003)  | 150       |
| 6     | Sulphur Dioxide              | mg/Nm³              | 20.57        | IS 11255 (P-2): 1985(Reaff:2003) |           |
| 7     | Nitrogen Dioxide             | ppm                 | 284.35       | IS 11255 (P-7) 2005              | 1100      |
| 9     | Carbon monoxide              | mg/Nm³              | BDL(DL 1)    | IS 13270 -1992(Reaff 2009)       | 150       |
| 10    | Carbon dioxide               | %V/V                | 14.4         | IS 13270:1992(Renff:2009)        |           |
| 11    | Volatile Organic Compound    | ppm                 | 2.8          | PID Gus Detector                 |           |
| 12    | Hydrocarbon                  | ppm                 | 7.4          | NDIR techinque                   |           |
| 13    | Moisture                     | 96                  | 1.09         | IS 11255 (P-3) 2003              |           |
| 14    | Mercury                      | mg/Nm <sup>2</sup>  | BDL(DL 0.01) | USEPA method 29                  |           |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, m/sec -Meter per second, Nm³/hr-Normal cubic meter per hour, mg/Nm³-Milligrams per Normal cubic meter, °C -Celsius, ppm-Parts per million, %V/V-Percentage Volume per Volume. Remarks: No direct TNPCB / CPCB Limits for the above parameters; meets as per MoEF standards, where applicable.

\*\*\*End of Report\*\*\*

### TEST REPORT - Drilling Fluid Chemical

Page I of 1

Sample Description Sampling Mark

: Powder

: 30/03/2016

: Lime Stone Powder

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/2016 - 30/03/2016

Analysis Commenced On

| S.N<br>o. | Parameters | Units | Results     | Test Method  |
|-----------|------------|-------|-------------|--------------|
| 1         | Cadmium    | mg/kg | BDL(DL 0.1) | USEPA Method |
| 2         | Mercury    | mg/kg | BDL(DL 0.1) | USEPA Method |

Note:-BDL - Below Detection Limit, DL- Detection Limit, mg/Kg- Milligrams per kilogram.

### 6.0 NOISE LEVEL STATUS

August North

### 6.1 Rationale Behind Sampling

As part of the occupational health and safety measures certain safeguards have been incorporated to mitigate noise pollution in working environments. Thus, background noise levels were measured at Ambient locations.

### 6.2 Data Presentation

The abstract of Noise level data are given in Table.

Sample Description

: Noise Level Data

Sample Location

: Near Canteen(South East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

:29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 1    | 06.00       | 07.00    | 52.7        |
| 2    | 07.00       | 08.00    | 51.6        |
| 3    | 08.00       | 09.00    | 55.3        |
| 4    | 09:00       | 10.00    | 52.9        |
| 5    | 10.00       | 11.00    | 54.3        |
| 6    | 11.00       | 12.00    | 51.9        |
| 7    | 12.00       | 13.00    | 52.7        |
| 8    | 13.00       | 14.00    | 53.6        |
| 9    | 14.00       | 15.00    | 51.8        |
| 10   | 15.00       | 16.00    | 50.9        |
| 11   | 16.00       | 17.00    | 52.7        |
| 12   | 17.00       | 18.00    | 53.6        |
| 13   | 18.00       | 19.00    | 52.4        |
| 14   | 19.00       | 20.00    | 51.9        |
| 15   | 20.00       | 21.00    | 50.9        |
| 16   | 21.00       | 22.00    | 51.8        |
|      | NOISE LEVEI | (AVG)    | 52.6 dB(A)  |

### Noise Standards - CPCB:

Industrial Area : Day Time-75 dB (A).
 Commercial Area : Day Time-65 dB (A).

iii. Residential Area : Day Time-55 dB (A). iv. Silence Zone : Day Time-50 dB (A).

v. Working Area : 90 dB (A).

Note: 1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Near Canteen(South East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

:29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN         | TIME     | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 17   | 22.00       | 23.00    | 40.2        |
| 18   | 23.00       | 24.00    | 41.8        |
| 19   | 24.00       | 01.00    | 43.9        |
| 20   | 01.00       | 02.00    | 40.8        |
| 21   | 02.00       | 03.00    | 42,6        |
| 22   | 03.00       | 04.00    | 43.7        |
| 23   | 04.00       | 05.00    | 44.8        |
| 24   | 05.00       | 06.00    | 46.9        |
|      | NOISE LEVEI | (AVG)    | 43.1 dB(A)  |

### Noise Standards - CPCB:

i. Industrial Area

: Night Time-70 dB (A).

ii. Commercial Area

: Night Time-55 dB (A).

iii. Residential Area

: Night Time-45 dB (A).

iv. Silence Zone

: Night Time-40 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Night Time shall mean from 10.00 pm to 6.00 am.

Sample Description

: Noise Level Data

Sample Location

: Near Bore Water Pand(North East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 1    | 06.00       | 07.00    | 59.3        |
| 2    | 07.00       | 08.00    | 56.7        |
| 3    | 08.00       | 09.00    | 60.2        |
| 4    | 09.00       | 10.00    | 52.7        |
| 5    | 10.00       | 11.00    | 57.3        |
| 6    | 11.00       | 12.00    | 56.7        |
| 7    | 12.00       | 13.00    | 55.1        |
| 8    | 13.00       | 14.00    | 56.7        |
| 9    | 14.00       | 15.00    | 57.8        |
| 10   | 15.00       | 16.00    | 53.7        |
| 11   | 16.00       | 17,00    | 54.8        |
| 12   | 17.00       | 18.00    | 55.9        |
| 13   | 18.00       | 19.00    | 56.7        |
| 14   | 19.00       | 20.00    | 54.2        |
| 15   | 20.00       | 21.00    | 50.9        |
| 16   | 21.00       | 22.00    | 56.7        |
|      | NOISE LEVEL | (AVG)    | 56.0 dB(A)  |

### Noise Standards - CPCB:

Industrial Area

: Day Time-75 dB (A).

ii. Commercial Area

: Day Time-65 dB (A).

iii. Residential Area

: Day Time-55 dB (A).

iv. Silence Zone

: Day Time-50 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Near Bore Water Pand(North East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 17   | 22.00       | 23.00    | 54.1        |
| 18   | 23.00       | 24.00    | 48.2        |
| 19   | 24.00       | 01.00    | 52.0        |
| 20   | 01.00       | 02.00    | 56.1        |
| 21   | 02.00       | 03.00    | 55.2        |
| 22   | 03.00       | 04.00    | 52.4        |
| 23   | 04.00       | 05,00    | 50.0        |
| 24   | 05.00       | 06.00    | 52.1        |
|      | NOISE LEVEI | (AVG)    | 52.5 dB(A)  |

### Noise Standards - CPCB;

i. Industrial Area

: Night Time-70 dB (A).

ii. Commercial Area

: Night Time-55 dB (A).

iii. Residential Area

: Night Time-45 dB (A).

iv. Silence Zone

: Night Time-40 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Night Time shall mean from 10.00 pm to 6,00 am.

Sample Description

: Noise Level Data

Sample Location

: Near HSD Tank(South West)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 1    | 06.00       | 07.00    | 75.1        |
| 2    | 07.00       | 08.00    | 76.8        |
| 3    | 08,00       | 09.00    | 78.3        |
| 4    | 09.00       | 10.00    | 72.8        |
| 5    | 10.00       | 11.00    | 71.7        |
| 6    | 11.00       | 12,00    | 68.8        |
| 7    | 12.00       | 13.00    | 68.2        |
| 8    | 13.00       | 14.00    | 69.9        |
| 9    | 14.00       | 15,00    | 65.2        |
| 10   | 15.00       | 16.00    | 62.8        |
| 11   | 16.00       | 17.00    | 66,9        |
| 12   | 17.00       | 18.00    | 64.8        |
| 13   | 18.00       | 19.00    | 69.9        |
| 14   | 19.00       | 20.00    | 66.2        |
| 15   | 20.00       | 21.00    | 69.7        |
| 6    | 21.00       | 22.00    | 69.8        |
|      | NOISE LEVEL | (AVG)    | 69.8 dB(A)  |

### Noise Standards - CPCB:

Industrial Area

: Day Time-75 dB (A).

ii. Commercial Area

: Day Time-65 dB (A).

iii. Residential Area

: Day Time-55 dB (A).

iv. Silence Zone

: Day Time-50 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Near HSD Tank(South West)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 17   | 22.00       | 23.00    | 68.5        |
| 18   | 23.00       | 24.00    | 70.9        |
| 19   | 24.00       | 01.00    | 69.3        |
| 20   | 01.00       | 02.00    | 69.9        |
| 21   | 02.00       | 03.00    | 68.8        |
| 22   | 03.00       | 04.00    | 70.1        |
| 23   | 04.00       | 05.00    | 68.2        |
| 24   | 05.00       | 06.00    | 66.7        |
|      | NOISE LEVEI | L(AVG)   | 69.1 dB(A)  |

### Noise Standards - CPCB:

i. Industrial Area : ii. Commercial Area :

: Night Time-70 dB (A). : Night Time-55 dB (A).

iii. Residential Area

: Night Time-45 dB (A).

iv. Silence Zone

: Night Time-40 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Night Time shall mean from 10.00 pm to 6.00 am.

Sample Description

: Noise Level Data

Sample Location

: Near Chemical Storage (North East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| .No | RUN TIME |          | NOISE LEVEL |
|-----|----------|----------|-------------|
| 200 | TIME ON  | TIME OFF | dB(A)       |
| 1   | 06.00    | 07.00    | 64.3        |
| 2   | 07.00    | 08.00    | 62.9        |
| 3   | 08.00    | 09.00    | 61.9        |
| 4   | 09.00    | 10.00    | 64.2        |
| 5   | 10.00    | 11.00    | 65.8        |
| 6   | 11.00    | 12.00    | 63.9        |
| 7   | 12.00    | 13.00    | 67.4        |
| 8   | 13,00    | 14.00    | 66.2        |
| 9   | 14.00    | 15.00    | 63.9        |
| 10  | 15.00    | 16:00    | 68.I        |
| 11  | 16.00    | 17.00    | 64.9        |
| 12  | 17.00    | 18.00    | 63.2        |
| 3   | 18.00    | 19.00    | 68.2        |
| 4   | 19,00    | 20.00    | 69.7        |
| 5   | 20.00    | 21.00    | 61.2        |
| 6   | 21.00    | 22.00    | 63.8        |

### Noise Standards - CPCB:

i. Industrial Area

: Day Time-75 dB (A).

ii. Commercial Area

: Day Time-65 dB (A).

iii. Residential Area

: Day Time-55 dB (A).

iv. Silence Zone

: Day Time-50 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Near Chemical Storage (North East)

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 17   | 22.00       | 23.00    | 60.8        |
| 18   | 23.00       | 24.00    | 59.3        |
| 19   | 24.00       | 01.00    | 60.5        |
| 20   | 01.00       | 02.00    | 58.3        |
| 21   | 02.00       | 03.00    | 56.1        |
| 22   | 03.00       | 04.00    | 57.2        |
| 23   | 04.00       | 05.00    | 52.8        |
| 24   | 05.00       | 06.00    | 59.3        |
|      | NOISE LEVEI | (AVG)    | 58.0 dB(A)  |

### Noise Standards - CPCB:

i. Industrial Area

: Night Time-70 dB (A).

ii. Commercial Area : Night Time-55 dB (A).

iii. Residential Area : Night Time-45 dB (A).

iv. Silence Zone : Night Time-40 dB (A).

Working Area

: 90 dB (A).

Note:

1. Night Time shall mean from 10.00 pm to 6.00 am.

Sample Description

: Noise Level Data

Sample Location

: Near Rotary Table

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 1    | 06.00       | 07.00    | 81.9        |
| 2    | 07.00       | 08.00    | 82.7        |
| 3    | 08.00       | 09.00    | 84.3        |
| 4    | 09.00       | 10.00    | 81.9        |
| 5    | 10.00       | 11.00    | 82.4        |
| 6    | 11.00       | 12.00    | 80.7        |
| 7    | 12.00       | 13.00    | 89.2        |
| 8    | 13.00       | 14.00    | 81.3        |
| 9    | 14.00       | 15.00    | 83.6        |
| 10   | 15.00       | 16.00    | 81.9        |
| 11   | 16.00       | 17.00    | 82.9        |
| 12   | 17.00       | 18.00    | 83.5        |
| 13   | 18.00       | 19.00    | 84.1        |
| 14   | 19.00       | 20.00    | 82.6        |
| 15   | 20.00       | 21.00    | 83.2        |
| 16   | 21,00       | 22.00    | 82.1        |
|      | NOISE LEVEL | (AVG)    | 83.0 dB(A)  |

### Noise Standards - CPCB:

i. Industrial Area

: Day Time-75 dB (A).

ii. Commercial Area

: Day Time-65 dB (A).

iii. Residential Area

: Day Time-55 dB (A).

iv. Silence Zone

: Day Time-50 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Near Rotary Table

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME    |          | NOISE LEVEL |
|------|-------------|----------|-------------|
|      | TIME ON     | TIME OFF | dB(A)       |
| 17   | 22.00       | 23.00    | 78.3        |
| 18   | 23.00       | 24.00    | 81.4        |
| 19   | 24.00       | 01.00    | 80.6        |
| 20   | 01.00       | 02.00    | 82.9        |
| 21   | 02.00       | 03.00    | 81.2        |
| 22   | 03.00       | 04.00    | 80.5        |
| 23   | 04.00       | 05.00    | 83.6        |
| 24   | 05.00       | 06.00    | 81.7        |
|      | NOISE LEVEI | (AVG)    | 81.3 dB(A)  |

### Noise Standards - CPCB:

i. Industrial Area

; Night Time-70 dB (A).

ii. Commercial Area

: Night Time-55 dB (A).

iii. Residential Area

: Night Time-45 dB (A).

iv. Silence Zone

: Night Time-40 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Night Time shall mean from 10.00 pm to 6.00 am.

Sample Description

: Noise Level Data

Sample Location

: Suction Tank

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| S.No | RUN TIME   |          | NOISE LEVEL |
|------|------------|----------|-------------|
|      | TIME ON    | TIME OFF | dB(A)       |
| 1    | 06.00      | 07.00    | 69.3        |
| 2    | 07.00      | 08.00    | 70.4        |
| 3    | 08.00      | 09.00    | 70.5        |
| 4    | 09.00      | 10.00    | 69.8        |
| 5    | 10.00      | 11.00    | 71.6        |
| 6    | 11.00      | 12.00    | 72.4        |
| 7    | 12.00      | 13.00    | 71.9        |
| -    | 13.00      | 14.00    | 70.5        |
| 9    | 14.00      | 15.00    | 72.4        |
| 10   | 15.00      | 16.00    | 71.3        |
| 11   | 16.00      | 17.00    | 70.2        |
| 12   | 17.00      | 18.00    | 69.3        |
|      | 18.00      | 19.00    | 71.1        |
| 13   | 19.00      | 20.00    | 72.6        |
| 15   | 20.00      | 21.00    | 70.4        |
| 16   | 21.00      | 22.00    | 71.2        |
| -    | NOISE LEVE |          | 70.9 dB(A)  |

# Noise Standards - CPCB:

iv.

i. Industrial Area

: Day Time-75 dB (A).

ii. Commercial Area

: Day Time-65 dB (A).

iii. Residential Area

Silence Zone

: Day Time-55 dB (A). : Day Time-50 dB (A).

v. Working Area

: 90 dB (A).

Note:

1. Day Time shall mean from 6.00 am to 10.00 pm.

Sample Description

: Noise Level Data

Sample Location

: Suction Tank

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/16 - 30/03/16

Instrument Used

: Extech (Digital Sound Level Meter)

| NOISE | TIME     | RUN  | S.No   |
|-------|----------|--|--|
| dE    | TIME OFF | TIME ON  | -  |
| 6     | 23.00    | 22.00  | 17   |
| 7     | 24.00    | 23.00  | 18   |
| 7     | 01.00    | 24.00  | and the same of th |
| 6     | 02.00    | The second secon | 19   |
| 6     | 03.00    | 01.00  | 20   |
| 6     | 04.00    | 02.00  | 21   |
| 7     |          | 03,00  | 22   |
| 6     | 05.00    | 04.00  | 23   |
|       | 06.00    | 05.00  | 24   |
| 68.6  | (AVC)    | NOISE LEVE   |  |

# Noise Standards - CPCB:

i. Industrial Area

: Night Time-70 dB (A).

ii. Commercial Area

: Night Time-55 dB (A)-

iii. Residential Area

: Night Time-45 dB (A).

iv. Silence Zone

: Night Time-40 dB (A).

v. Working Area

; 90 dB (A).

Note:

Night Time shall mean from 10.00 pm to 6.00 am.

Page 1 of 1

Sample Description Sampling Mark

: DG Stack Emission : DG 1430 KVA – 2

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/2016 - 30/03/2016

: 30/03/2016

Analysis Commenced On

| S.No. | Parameters                   | Units  | Results      | Test Method                      | Standards |  |
|-------|------------------------------|--------|--------------|----------------------------------|-----------|--|
| 1     | Stack Diameter               | meter  | 0.2          |                                  |           |  |
| ż     | Stack Temperature            | PC.    | 323          | IS 11255(P-3)2008                |           |  |
| 3     | Velocity of flue gas         | m/sec  | 12,4         | 1S 11255 (P-3)2008               |           |  |
| 4     | Flow rate of stack gases     | Nm³/hr | 636          | IS 11255 (P-3)2008               |           |  |
| 5     | Suspended Particulate Matter | mg/Nm³ | 57,35        | IS 11255 (P-1) 1985(Reaff:2003)  | 150       |  |
| 6     | Sulphur Dioxide              | mg/Nm³ | 20,57        | IS 11255 (P-2) :1985(Reaff:2003) |           |  |
| 7     | Nitrogen Dioxide             | ppm.   | 284.35       | 18 11255 (P-7) 2005              | 1100      |  |
| 9     | Carbon monoxide              | mg/Nm³ | BDL(DL 1)    | IS 13270 -1992(Reaff:2009)       |           |  |
| 10    | Carbon dioxide               | %V/V   | 14.4         | IS 13270:1992(Reaff:2009)        |           |  |
| 11    | Volatile Organic Compound    | ppm    | 2.8          | PID Gas Detector                 |           |  |
| 12    | Hydrocarbon                  | ppm    | 7.4          | NDIR techinque                   |           |  |
| 3     | Moisture                     | %      | 1.09         | IS 11255 (P-3) 2003              |           |  |
| 4     | Mercury                      | mg/Nm³ | BDL(DL 0.01) | USEPA method 29                  | -         |  |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, m/sec -Meter per second, Nm²/hr-Normal cubic meter per hour, mg/Nm²-Milligrams per Normal cubic meter, °C -Celsius, ppm-Parts per million, %V/V-Percentage Volume per Volume. Remarks: No direct TNPCB / CPCB Limits for the above parameters; meets as per MoEF standards, where applicable.

\*\*\*End of Report\*\*\*

Page Lof 1

Sample Description Sampling Mark

: DG Stack Emission : DG 1430 KVA - 1

Sample Drawn By

: Hubert Enviro Care Systems Private Limited

Sampling/Received Date

: 29/03/2016 - 30/03/2016

Analysis Commenced On

: 30/03/2016

| S.No. | Parameters                   | Units               | Results      | Test Method                     | Standards |
|-------|------------------------------|---------------------|--------------|---------------------------------|-----------|
| 1     | Stack Diameter               | meter               | 0.2          | 7                               |           |
| 2     | Stack Temperature            | °C                  | 246          | IS 11255(P-3)2008               |           |
| 3     | Velocity of flue gas         | m/sec               | 11.0         | IS 11255 (P-3)2008              |           |
| 4     | Flow rate of stack gases     | Nm <sup>3</sup> /hr | 648          | IS 11255 (P-3)2008              |           |
| 5     | Suspended Particulate Matter | mg/Nm <sup>3</sup>  | 52.24        | IS 11255 (P-1) 1985(Reaff 2003) | 150       |
| 6     | Sulphur Dioxide              | mg/Nm³              | 15.43        | IS 11255 (P-2):1985(Reaff:2003) |           |
| 7     | Nitrogen Dioxide             | ppm                 | 254.08       | IS 11255 (P-7) 2005             | 1100      |
| 9     | Carbon monoxide              | mg/Nm <sup>1</sup>  | BDL(DL 1)    | ) ES 13270 -1992(Reaff 2009)    |           |
| 10    | Carbon dioxide               | %V/V                | 12.4         | IS 13270:1992(Reaff:2009)       |           |
| 11    | Volatile Organic Compound    | ppm                 | 3.4          | PID Gas Detector                |           |
| 12    | Hydrocarbon                  | ppm                 | 8.3          | NDIR techinque                  | -         |
| 13    | Moisture                     | 96                  | 1.12         | IS 11255 (P-3) 2003             | -         |
| 4     | Mercury                      | mg/Nm³              | BDL(DL 0.01) | USEPA method 29                 | -         |

Note:-BDL -Below Detection Limit, D.L-Detection Limit, m/sec -Meter per second, Nm²/hr-Normal cubic meter per hour, mg/Nm²-Milligrams per Normal cubic meter, °C -Celsius, ppm-Parts per million, %V/V-Percentage Volume per Volume. Remarks: No direct TNPCB / CPCB Limits for the above parameters; meets as per MoEF standards, where applicable.

\*\*\*End of Report\*\*\*



# Industrial Waste Management Association

Regd. No. 256 / 2002

No:13/4, Indira Colony, First Street, First Avenue, Ashok Nagar, Chennai - 600 083

| Management Associate                          | lower - I, 1- gandh                            | Ltd. located at                 | This is to certify that                                    |
|---|--|---------------------------------|--|
| Management Association. The membership no. is | lower - I, 1- gandhi Primis is a member of the | located at 11th floor. Next Win | This is to certify that M/S. Oil X Natural Gas Corporation |
| 1162  | Industrial Waste                               | ing JONGS CMDA                  | al gas Corporation   |

Date 28.01.13

Chairman

ANNEXCRE.

# E882 104 Cescription of materials OIL AND NATURAL GAS CORPORATION LIMITED MATERIALS GATE PASS - OUT Name & Designation of Superior to son and Nos / **HORLIGHE** CAUVERY ASSET. F. KT-Comme of the department / company with prisod birikerstmonog Nameofbersons SPANIER The transfer where the present is to be handed over Purpase. 13 NW 3 L TW WHOM OF PRINSEL Estant Department With the Thy Sc 6 49 O'CHILD 100 m Name & Designation Security check by with Signature [Refer to Para 26] APPENDIX-8 + Remarks Y MES



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MSTC LIMITED

( A Government of India Execusive)

680 Fax - 8445220091

69;Armenian Struet Leolavskii Building, 2nd Floor Chemisi660001

### BID SHEET

| Auction Ref No : | MSTC/SRO/ONGC KARAKKAL/2/KARAKKAL/16-17/3216 |
|------------------|--|
| Auction Period : | 2016-06-22::11:45:002016-06-22::17:19:00     |
| Currency:        | 3NR  |

| Seller Name : | ONGC KARAIKKAL |  |
|---------------|----------------|--|
| Location :    | KARAIKAL       |  |

| Lot No.                          | Lot Name                  | Quantity | Status | Buyer                                     | Rate     | Hat.Value | ED        | VAT/ST        | Surcharge | TCS           | Others | Total<br>Payment | AL | DO<br>Issd |
|----------------------------------|---------------------------|----------|--------|---|----------|-----------|-----------|---------------|-----------|---------------|--------|------------------|----|------------|
| KKL-020<br>- Prebid<br>Hs. 50000 | BURNT/used<br>DIL         | 150.0 NO | Sold   | matc/Mega petro<br>products/58228         | 4104.00  | 615600.00 | 0.0(0.0%) | 30780.0(5.0%) | 0.0(0.0%) | 0,0<br>(1.0%) | 0,0    | 646380.00        | п  | n          |
| KKL-023                          | Logging Gun<br>- Asserted |          |        | mstc/SRIKAMATCHI<br>AMMAN<br>STEELS/20305 | 15999.00 | 239985.00 | 0.0(0,0%) | 11999.0(5.0%) | 0.0(0.0%) | 0.0<br>(1.0%) | 0,0    | 251984.00        | n. | n          |

| TYPE  | MATERIAL VALUE | SECURITY DEPOSIT | NO. OF IYEMS |
|-------|----------------|------------------|--------------|
| SOLD  | 855585.00      | 213896.00        | U .          |
| STA   | (0.00          | [0.00            | 0            |
| TOTAL | WSSS85.00      | 213896.00        |              |

| Total no of Items Withdrawn :      | 0  |
|------------------------------------|----|
| Total no of Items rejected :       | (0 |
| Total no of Nobid Items :          | p  |
| Total no of Items in the Auction : | 12 |

Page I of I

Sample Description Sampling Mark

: Sludge : Drill Cutting Sample

Sampling Mark
Sample Drawn By
Sampling Received Date

: Hubert Enviro Care Systems Private Limited

ANNEXME . G

Sampling/Received Date Analysis Commenced On

: 29/03/2016 - 30/03/2016

is Commenced On : 30/03/2016

| S.No. | Parameters       | Units | Results      | Test Method                    |
|-------|------------------|-------|--------------|--------------------------------|
| 1     | Zine             | mg/kg | 104.6        | EPA 3050 B                     |
| 2     | Manganese        | mg/kg | 422.33       | APHA-3030D, APHA-3111B         |
| 3     | Lead             | mg/kg | BDL(DL 0.1)  | EPA 3050B/EPA 7420             |
| 4     | Cadmium          | mg/kg | 2.84         | EPA 3650 B/EPA 7130            |
| 5     | Copper as Cu     | mg/kg | 67.28        | EPA 3050B/EPA 7210             |
| 6     | Iron             | mg/kg | 39054.37     | USEPA Method 3050B&EPA 2000    |
| 7     | Mercury          | mg/Kg | BDL(DL 0.1)  | EPA 7196 A                     |
| 8     | Nickel           | mg/kg | 6.97         | EPA 3050B/EPA 7520             |
| 9     | Oil & Grease     | mg/kg | BDL(DL1)     | USEPA Method 90718             |
| 10    | Alkalinity       | mg/kg | 1000.0       | USEPA Method 310 2             |
| 11    | Total Chromium   | mg/kg | 78.21        | USEPA Method 3050B, AAS Method |
| 12    | Arsenic          | mg/kg | BDL(DL 0.05) | EPA 7062                       |
| 13    | Acidity          | mg/kg | BDL(DL1)     | HECS/SQ/SQP/016                |
| 14    | Vanadium         | mg/kg | BDL(DL0.1)   | HECS/SO/SOP/020                |
| 15    | Cobalt           | mg/kg | BDL(DL0.1)   | USEPA 3050 B                   |
| 16    | Inorganic Soilds | mg/kg | 16792.0      | APHA 2540 - C                  |

\*\*\*End of Report\*\*\*

ANGE XURE -7

# **Details of CSR Spend out in Thiruvarur District**

| Financial Year | Amount (in Rs.) |
|----------------|-----------------|
| 2013-14        | 1,48,96,395     |
| 2014-15        | Nil             |
| 2015-16        | 6,13,670        |
| Total          | 1,55,10,065     |

ANNEXURE 8

# EMP Compliance Inspection

# Rig E 760 XIV #KNAK

Date: 23rd March 2016

- Daily record to be maintained for the generation of effluent (waste) water from various sources into the waste pit.
- 2. Facility to treat the effluent water (in the waste pit) properly does not exist.
- 3. Acoustic enclosures to be provided to the Gensets (Power packs)
- Board for "Diesel Tank/POL Storage" and "Chemicals Storage/Chemicals Store" to be made and displayed.
- 5. Two of the drilling shift crew are yet to undergo "Well Control" training.

Sd/= (K. S. Subramanian) DGM (Chemistry)-HSE, CB

Note- The above report is being sent through SAP on 28.3.2016. No signed hard copy is being sent.

ANNEXORE. 9

# EXECUTIVE SUMMARY

### 1. Introduction

### 1.1 Social Audit

Social Audit is a process of examining the impact of any programmes on a participatory manner inclusive of the stake holders for whom the programme was intended. The final output Social Audit is a Social Audit report out lining the benefits the community obtained based on the objectives of the project. Social audit gives an opportunity for the intended beneficiary to examine how far the project achieved its objectives and the outcome of the projects by way of impacts created.

# 1.2. An overview of CSR project of ONGC in Tamil Nadu

The focus of the Corporate Social Responsibility Programme of Oil and Natural Gas Corporation Limited (ONGC) is the overall development & improvement in the quality of life of habitations and communities, particularly of the disadvantaged groups, in and around the neighbourhoods of Oil and Natural Gas Corporation Limited (ONGC) project sites.

ONGC under its CSR policy has implemented various projects from 2011-2014 based on the needs of the neighbouring communities with the participation of the Communities, District and local Administrations.

ONGC had requested the Madras School of Social Work (MSSW) (an autonomous college affiliated to the University of Madras) to conduct social audit of the CSR Projects implemented by ONGC for the year 2011to 2014.

An amount of Rs. One crore and 10 lakhs were allocated under Cauvery Basin for the year 2013-14 for projectized and non-projectized activities. The allocated funds were spent in accordance with guidelines. Thirty seven projects were undertaken in the sectoral areas covering education, infrastructural support, initiatives for physically/mentally challenged and sponsorship of a technical meet. These initiatives have benefitted 15,119 underprivileged persons comprising of students, teachers, orphans, special children and physically challenged.

#### 1.3. Need for conduction of the social audit

The main objective of Corporate Social Responsibility interventions of ONGC is the holistic development of families, villages and communities, particularly the vulnerable in the selected districts of Tamil Nadu. The Social Audit (SA) was taken up to assess the impact of the interventions through a participatory process.

#### 1.4 Social audit process followed in the ONGC study

ONGC under its CSR policy has implemented various projects during 2011-14 based on the needs of the targeted communities with the support of District administration, Non Governmental and Community Based Organisations, Civil Societies, communities, families and individual beneficiaries. Identification of primary and secondary stakeholders is a critical activity of social audit study. The team identified the following primary and secondary stakeholders.

The primary stakeholders who were part of this process were the beneficiaries of the project, agency personnel/local panchayats which received the support.

The secondary stakeholders who were part of this process were the district administration and implementing agencies of the project through whom the benefits were channeled.

The study focused on the final beneficiaries of the CSR activities from 2011 to 2014. The SA exercise includes secondary data check, field observations, and participatory social audit of the programme components and assessment of various stakeholders role including the beneficiaries.

#### 2. Madras School of Social Work (MSSW)

The Madras School of Social Work was established in 1952 by Mrs. Mary Clubwala Jadhav, under the auspices of Madras State Branch of the Indian Conference of Social Work (renamed Indian Council of Social Welfare) and the Guild of Service (Central). The College is run under the aegis of the Society for Social Education and Research. It is a member of the Association of Schools of Social Work in India and the Asian Pacific Association of Social Work Education and is also an affiliate of International Association of Schools of Social Work.

Madras School of Social Work is an autonomous college affiliated to the University of Madras. The School offers various Under-Graduate and Post Graduate courses.

## 2.1 Consultancy Division of Madras School of Social Work

MSSW has established an exclusive Division for extending Consultancy services to Government Departments, Public and Private sector undertakings and Non Governmental and International NGOs in Community Development, Social Development and management sectors. The specific assignments include evaluation studies, monitoring, CSR investment plans, needs assessment and other institution based activities on the social and environmental issues. The MSSW has a core team of professionals representing the specialised areas viz., social, environmental, management, training and research fields. The Institution has adequate infrastructure to carry out the research projects.

## Methodology of the Evaluation study

The objectives of the Social audit of CSR are to study the compliance of the CSR activities in accordance with the Guidelines and appraise the performance in the background of MOU signed by ONGC with GOI.

The social audit/ impact assessment study has outlined the effectiveness of the ONGCs environmental concerns and practices and major social development projects in the Cauvery Basin in eight districts of Tamilnadu viz., Chennai, Cuddalore, Nagapattinam, Thiruvarur, Thiruvallur, Ariyalur, Thanjavur and Ramanathapuram from 2011-14.

## 3.1 Scope of the study

- Collected required primary data from the implementing agencies and beneficiaries
- ii The analysis report highlighted the process of implementation of selected activities and the positive impact of each activity on the community, families and individuals.
- Beneficiary interview, Focus Group Discussions (FGDs), Key informants interview and case studies have been used to elicit data on the sub-projects based on the need.

- The sectorwise impact has been brought to light for the effectiveness of the programme
- v The necessary recommendations and changes required in policy/approaches have been suggested for improvement of the future CSR activities of ONGC.

#### 3.2 The Objectives of the Social Audit

- i. To study the effectiveness of CSR activities executed by ONGC.
- ii. To analyze the impact of the activities implemented by the ONGC.
- iii. To examine the participation of community in the CSR programmes, orientation and practice of the community towards ownership and sustainability of the community assets created through CSR programme
- To give suggestions and recommendations for improving the CSR activities of the ONGC.
- To document the various actions taken by the ONGC and other partner agencies in implementing the activities
- vi. To highlight best practices, strategies and initiatives adopted in the project

#### 3.2.1 The specific objectives of the study

- Collate quantitative data on the number of beneficiaries who have directly benefitted from each of the interventions i.e. in environment and CSR activities
- ii. Collect qualitative information of the community benefits from these interventions
- iii. Record impact of the interventions as evidenced through community change
- iv. Document case studies of children and families who have benefitted
- v. Provide recommendations for future interventions.

#### 3.3 Study process

- The study teams received orientation and training in the study field, methods, tools, techniques and reporting formats.
- Collected the primary data from each village through Focus Group Discussion, interviews, Case studies and secondary data from the existing records.
- · Verified the social accounts through Social Audit Panels.

#### 3.4 Sources of Data

The primary data source includes the responses from the beneficiaries and agencies and secondary data elicited through quantitative and qualitative methods, reports, documents and literature from partner agencies and the Government.

## 3.5 Summary of Samples actually covered for the study

The actual samples covered for the Social Audit/Impact assessment study of the CSR projects of ONGC is as follows.

| District       | Fo. of<br>villages/<br>Activities<br>covered |     | Proposed<br>Ecy<br>Informants<br>Interview<br>(EII) | Froposed<br>Found Group<br>Discussions(FQD) | No. of<br>Case<br>studies |
|----------------|--|-----|---|---|---------------------------|
| Chemist        | 09   | 50  | 09  | 10  | 03                        |
| Cuddalore      | 11   | 50  | 11  | 10  | 05                        |
| Nagapetinein   | 12   | 35  | 11  | 10  | (17.)                     |
| Thiraverur     | 08   | 105 | 17  | 12  | -                         |
| Theuvellur     | 07   | 25  | 07  | 05  | 02                        |
| Ariyalur       | 04   | 10  | 05  | 03  |                           |
| Thanjayur      | 10   | 100 | 09  | 09  | -                         |
| smannthopyram  | 14   | 93  | 14  | 10  | 05                        |
| Ne publication | 75   | 468 | 83  | 69  | 15                        |

The comparison of proposed samples and actual covered showed that there was a variation in the number of villages covered, number of beneficiaries, Key Informants Interview, Focus Group Discussion and case studies. This is due to exclusion of Pudukottai district, where no activities have been implemented. On directions received from ONGC officials, two districts viz., Chennai and Ramanathapuram were included; hence there is deviation in sample size covered.

## 4. CSR activities - Physical and Financial achievement

Under CSR activities, Oil and Natural Gas Commission has implemented 518 activities in 8 districts of Tamil Nadu at a total cost of Rs. 11.34 crore between

2011-2014 (Three years). Of this, 135 activities were implemented in Chennai Basin at a total cost of Rs.5.84 crore and 383 activities were implemented at a cost of Rs.5.50 crore from Karaikal Asset.

TABLE 1 - THE DISTRICTWISE AND BASIN WISE ACTIVITIES AND ACHIEVEMENT

|   |                  |                   | 中国 医动脉 经        |                   | Tentral at 1    |                   | ERC TOTAL      |
|---|------------------|-------------------|-----------------|-------------------|-----------------|-------------------|----------------|
|   |                  | No. of activities | Expenditure     | No. of activities | Expenditure     | No. of activities | Expenditure    |
| 1 | Chennai          | 28(21%)           | 24567754(42%)   | Nil               | Nil             | 28(5%)            | 24567754(219   |
| 2 | Cuddalore        | 3(2%)             | 556500(1%)      | 25(7%)            | 2520437(5%)     | 28(5%)            | 3076937(3%)    |
| 3 | Nagapattinam     | 11(8%)            | 1623687(3%)     | 111(29%)          | 15244070(27%)   | 122(24%)          | 16867757(15%   |
| 4 | Thiruvarur       | 25(18%)           | 18629284(31%)   | 181(47%)          | 27756230(51%)   | 206(40%)          | 46385514(41%   |
| 5 | Thiruvallur      | 20(14%)           | 4952846(9%)     | 1                 | 85000(0%)       | 21(4%)            | 5037846(5%)    |
| 6 | Ariyalur         | 2(1%)             | 407000(1%)      | 6(2%)             | 2068000(4%)     | 8(2%)             | 2475000(2%)    |
| 7 | Thanjavur        | 8(7%)             | 1940607(3%)     | 19(5%)            | 1683000(3%)     | 27(5%)            | 3623607(3%)    |
| 8 | Ramanathapuram   | 38(27%)           | 5719759(10%)    | 40(10%)           | 5588800(10%)    | 78(15%)           | 11308559(10%   |
|   | TOTAL IN SECTION | 135<br>(100%)     | 58397437 (100%) | 383<br>(100%)     | 54945537 (100%) | 518(100%)         | 113342974(100% |

It was inferred that a majority of 206 activities (40%) at an expenditure of Rs.463, 85,514 (41%) has been incurred for Thiruvarur district, followed by 28 activities in Chennai district with an expenditure of Rs.245, 67,754 (21%), 122 activities at a cost of Rs.168, 67,757 (15%) in Nagapattinam and 78 activities at a cost of Rs.113, 08,559(10%) for Ramanathapuram district.

TABLE II - YEARWISE AND BASINWISE BREAK UP OF ACTIVITIES
AND ACHIEVEMENT

|      | CHENNAI BASIN |                      |                   | KARAII               | (AL ASSET         | GRAND TOTAL          |                   |  |
|------|---------------|----------------------|-------------------|----------------------|-------------------|----------------------|-------------------|--|
| S.NO | YEAR          | NO. OF<br>ACTIVITIES | EXPENDITURE       | NO. OF<br>ACTIVITIES | EXPENDITURE       | NO. OF<br>ACTIVITIES | EXPENDITURE       |  |
|      | 2011-12       | 44<br>(33%)          | 26930481<br>(46%) | 120<br>(31%)         | 10033399<br>(18%) | 164<br>(32%)         | 36963880<br>(33%) |  |

|   |         | 135<br>(100%) | 58397437<br>(100%) | 383<br>(100%) | 54945537<br>(100%) | 518<br>(100%) | 113342974<br>(100%) |
|---|---------|---------------|--------------------|---------------|--------------------|---------------|---------------------|
|   | 2013-14 | 39<br>(28%)   | 20451865<br>(35%)  | 152<br>(40%)  | 28977871<br>(53%)  | 191<br>(37%)  | 49429736<br>(43%)   |
| 3 | 2012-13 | 52<br>(39%)   | 11015091<br>(19%)  | 111<br>(29%)  | 15934267<br>(29%)  | 163<br>(31%)  | 26949358<br>(24%)   |

Table II - Basin and yearwise implementation of activities and expenditure revealed that, out of 518 activities, 191 (37%) at an expenditure of Rs.494,29,736 (43%) have been implemented in 2013-14, followed by 164 activities (32%) at an expenditure of Rs.369,63,880 (33%) in 2011-12 and 163 activities (31%) at a total cost of Rs.269,49,358 (24%) in 2012-13.

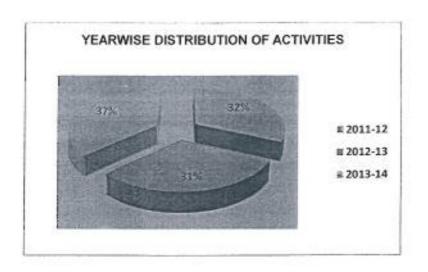
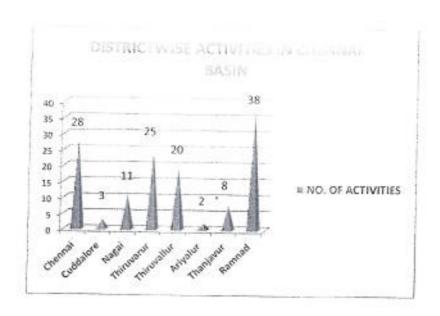
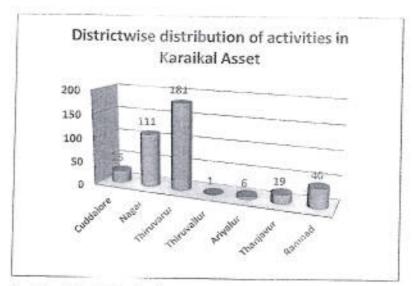


Table III – Basin and yearwise implementation of activities and expenditure revealed that in Chennai Basin, 39 activities have been implemented at a cost of Rs. 110,15,091 in 2012-13, 33 per cent of the activities at a cost of Rs.269,30,481 between 2011-12 and 28 per cent at a cost of Rs.204,51,865 in 2013-14.



In Karaikal asset, 40 per cent of the activities have been implemented at a total cost of Rs.289, 77,871 in 2013-14, 31 per cent at a cost of Rs.100, 33,399 between 2011-12 and 29 per cent at a cost of Rs.159, 34,267 in 2012-13.



## 5. Sector wise Social Audit findings

#### i. Education

The Educational support was a vital component in supplementing the efforts of Government in ensuring quality education and ONGC has prioritised and felt the need for providing the school infrastructure facilities

Furniture – Benches, tables, Cupboard etc

- Construction and renovation including roofing, flooring and compound wall and gates
- Construction and renovation of toilets with water facilities
- Provision for borewell, water storage through sintex and drinking water supply through water filters
- Supporting aids like computers, printers, LCD, Public Address System, bags and uniforms, Note books
- Supplementary nutrition

#### Impact

a. The support provided by ONGC has enhanced the infrastructure facilities and contributed for ensuring quality education. This has benefitted the rural, marginalised and tribal children. The visible changes have been brought through increased enrolment, reduction of school drop outs and technological advancement through computers are keeping pace with the private schools. The construction of girl friendly toilets has contributed in hygiene promotion, menstrual hygiene management and effective usage of toilets.

#### ii. Health

- a. ONGC has assisted the Institute of Child Health, Egmore towards purchase of 4 pouchers at the cost of Rs. 4 lakhs during 2013-14 and also Agitator cum incubator at the cost of Rs. 3 lakhs during 2012-13. The parents of the cancer affected children remembers with gratitude the service of Blood Bank at the Institute of Child Health, which supplies blood every day to the children in order to save their lives.
- b. During 2011-12, ONGC has provided assistance for purchase of Shadow less (2 Nos) Lamp for operation theatre and Cardio-Topography equipments at the cost of Rs. 3,70,000/-. These facilities have helped BPL families in accessing quality health services at affordable cost.

#### iii. Community infrastructure

a. Rs. 3, 90,000 was sanctioned to the Office of the DSP, Armed Reserve, Nagapattinam in the 2013-2014 for providing RO Plant. It was revealed that the funds have been fully utilized and maintained regularly.

- b. Rs.4,00,000 was sanctioned to the Office of the DSP, Armed Reserve, Nagapattinam to establish Model Check Post with Digital Board, Traffic Signals, CCTV Cameras, Automatic Drop Gate, furniture, and Syntex tank during 2013-14. This has been useful to the Police Department in controlling and regulation of traffic.
- c. Rs. 3 lakh was sanctioned to Adi-Dravidar Welfare Sangam, Agarathirunallur for construction of a community hall. It was found that the construction has been completed only upto lintel level due to inadequate funds.
- d. 'A' Class channel of 5 kms length has been sanctioned to Oampokkiyaru, Alivalam vaikkal at a cost of Rs. 4 lakh during 2013-14. It was revealed that the channel is being used for irrigation and the farmers have donated a portion of their lands and get compensation annually from ONGC. The fund has been effectively utilised
- e. A retaining wall at Samaankulam, Akkaraikottakam has been sanctioned at a cost of Rs. 2.50 lakh. The villages viz., Angadi colony, Thiruvasal Panniyur, Kulamanickam, Sammankulam and Melakulam SC colony have been benefitted by the construction retaining wall, Bore well with mini power pump, bathing ghat etc. The villages are fully utilising the services provided.
- f. The renovation of existing community hall at Manjur, Ramanathapuram at a cost of Rs.3, 98,720 has been sanctioned to the Village President during 2013-14. The facility has benefitted 2000 families for conducting family and village functions. The toilet facilities have not been provided in the community hall. It was suggested by the Consultant that the Panchayat can contribute funds for taking up this work.

#### iv. Environment

a. Panchayat Union School in Akkaraipettai, Nagapattinam has been sanctioned a project on 'Solid Waste Management' at a cost of Rs.2.25 lakh. It was found that Panchayat President did not initiate the project and expressed that the grant was inadequate and it is suggested that ONGC may take necessary action to get back the money sanction to the Panchayat Union School.

- b. Vanavil Social Development Trust has issued 100 solar lanterns to LIG families of Sunnanallur at a cost of Rs. 3.50 lakh. The families are using the solar lanterns provided and the amount has been fully utilised.
- c. Gandhi Peace Keeping Centre has been sanctioned Rs. 3.96 lakh for rural environment protection and income generation programme for 700 families from 5 SHGs in Thiruthuraipoondi in 2011-12. These include samplings of hybrid fruits, teak and other income yielding variety plants. The criterion adopted for the activity was that they should be SHG members and must have adequate space and water facility. The agency has effectively utilised the grant.
- d. The Land Scaping work at Collector's camp office, Ramanathapuram during 13-14 at a cost of Rs.4 iakh was sanctioned. It is located in the 5 acres of sprawling land. It includes water sprinklers, walking path etc.

#### v. Skill Development

a. Support for computer training centres at Armed Reserve Campus, Thiruvarur and Ramanathapuram were conducted at a cost of Rs. 4 lakh each for the benefit of children of police personnel. It was observed that the training may be extended to the other deserving boys and girls from other communities, instead of restricting only to the children of police personnel.

#### vi. ICDS centres

- a. ICDS centre at Boothavarayanpettai, Cuddalore has been provided with a support for mini water pump with borewell at a cost of Rs.1, 60,000 during 2013-14. The water quality has been assured to ICDS children supply and is also used for cooking noon meal. Apart from the ICDS Centre, the total village fetch water is from this source.
- b. Rs.2,00,000 was sanctioned to the Project Officer, District Rural Development Agency for construction of ICDS centre at New Gummidipoondi, Thiruvailur district during 2013-14. The ICDS centre has not been constructed due to delay in inviting tender procedures.

- a. Rs.25, 000 was sanctioned to a fire victim for construction of a house in Ramanathapuram. The house has been constructed only upto lintel level, due to paucity of funds.
- b. Financial support for 107 families affected by fire at Kalaignar Nagar, Myladuthurai has been sanctioned and the families have changed the fire resistant roof and it is a timely assistance by ONGC through district administration.

## viii Welfare of Differently-abled

- a. Deepam Special School for mentally retarded children in Chennai has been supported with paper plate making machine in 2011-12 at a total cost of Rs. 3, 44,925. This unit provided training for 9 children who are above 16 years. Due to this intervention, the children have been provided with job oriented skills and improved social interaction. The parents have expressed happiness and satisfaction over the progress in the behaviour of their children.
- b. Asha Niketan in Chennai was supported for purchase of paper plate making machine to start a production unit for providing job opportunities for mentally retarded children at a cost of Rs. 2,59,500 during 2011-12. It was observed that the unit was not functioning due to marketing problems.
- c. Arumai Illam in Myladuthurai has been supported with R.O. drinking water plant (100 LPM) and renovation of kitchen and dining hall at a cost of Rs.3, 49,310 during 2013-14. It is an integrated complex which provides shelter for senior citizens and destitute children. The RO plant has ensured safe drinking water and facelift provided for kitchen and dining hall has ensured hygienic environment.
- d. Anbumalar Special School for mentally challenged children in Gnayar, Thiruvallur has been provided with a tempo traveler at a cost of Rs. 9, 07,655. The special school provides education to mentally challenged children in the age groups of 3-16 years. The special credit to the institution is that it is located

in a remote village and caters its services to the special children from nearby villages. The school bus visits the villages and brings the children in the morning and leaves them in the evening. The provision of vehicle is highly useful.

e. National School for mentally retarded children in Kumbakonam has been provided with 30 sets of tables and chairs at a cost of Rs.1, 00,000 during 2013-14. The institution has fully utilized the ONGC funds.

## ix. Support to District administration

a. The support for water supply and sanitation to the district administration at Ariyalur at a cost of Rs. 4 lakh at Jayamkondom was sanctioned. The officials were unable to divulge the details of the project.

## 6. Performance Areas/Level of Achievement

| 5.No | Areas/Level of achievement   | Encellent | V.Good          | Good    | Fals           | Poor    |
|------|--|-----------|-----------------|---------|----------------|---------|
| 1    | Participatory approach   | Ħ         | 122 PARTIE NEED | FORMULA | No Designation | ALC: NO |
| 2    | Gender Focus   | 11        |                 |         |                |         |
| 9    | Vulnerable focus   | п         |                 |         |                |         |
|      | Grievance redress mechanism  |           | n               |         |                |         |
| 8    | Transparency   | #         |                 |         |                |         |
| 8    | Management   |           | ш               |         |                |         |
| 7    | Monitoring   |           |                 | =       |                |         |
| \$1  | Community ownership of the<br>project for sustainability of the<br>envisaged interventions | п         |                 |         |                |         |
| 9    | Introduction of innovative<br>interventions  | п         |                 |         |                |         |

The performance indicators were developed based on the sector wise activities for conducting social audit for ONGC. To grade the performance of ONGC, a five point scale was adopted and applied in the field verification, eliciting the extent of impact on the institutions, community, underprivileged and other marginalised families. The performance was adjudged based on the feedback from the key informants, focussed



group discussions and members of selected social audit panel. The social audit panel constituent academicians, members of respective neighbourhood committees, Women Self Help Groups, elected representatives of local bodies, Government officials, representatives of Non Governmental Organisations, besides the beneficiaries. The key informants include head of the institutions and co-opted members, community leaders, members belonging to sectorwise committees. The Focus Group Discussion involves the student community, village level federations/parents of anganwadi children, youth club members etc. The key findings, conclusions and suggestions were drawn based on adopting above methodology.

#### Conclusion

The social audit conducted revealed that there is infrastructure transformation in the sectors such as education, health and sanitation, community infrastructure, differently-abled. The visible changes have been witnessed in the area of rehabilitation of physically challenged especially in the rural areas.

The commitment of ONGC towards CSR and sustainability activities is a great boon to the community and the nation as a whole. The networking and communication with the district administration and stakeholders has contributed for the successful CSR Project.

## Suggestions

- Based on the Social Audit of the CSR activities, the following suggestions are offered for effective and sustainable implementation of the future CSR activities.
- ONGC may undertake needs assessment and pre-funding appraisals for identification of institutions and activities prior to sanction.
- ONGC may enter into an agreement with the partner agencies for ensuring proper operation, maintenance and sustainability of the assets created.
- iv. The project proposals may be obtained directly from the respective Government departments with detailed project proposals routed through District administration for transparency and accountability.

- v. Financial and technological appraisals may be undertaken for construction activities in consultation with the concerned departments and agencies to avoid incompletion of infrastructure facilities.
- vi. Village based and long term interventions may be included as a part of CSR activities
- vii. An inbuilt Monitoring Cell consisting of internal and external officials may be constituted for periodical review and monitoring. This would facilitate in effective utilisation of the grants sanctioned.
- viii. The best practices and demonstration projects may be replicated.
- ix. The successful CSR initiatives may be highlighted in print, electronic media and other publications.

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## Oil and Natural Gas Corporation Limited

# TRAINING DETAILS

| Training   | Total<br>persons                             | Valid<br>Persons  | Due<br>Persons             |
|--|--|---|----------------------------|
| TWCE   | 42   | 35  | 7                          |
| and the second s | 49   | 37  | 12                         |
| A CONTRACTOR OF THE CONTRACTOR |  | 89  | 66                         |
|  |  | 74  | Nil                        |
|  | Training  IWCF IADC MVT ONGC MVT Contractual | persons  <br>  IWCF   42  <br>  IADC   49  <br>  MVT ONGC   155 | persons   Persons     IWCF |

As for our office record

A.K. KULANDAN'ELAN EE (D) - HSE (DS)